



Cotton Candy



Fruit Punch



Harvest Moon



Lemon Zest



Orange Essence



Orange Sherbert



Sweet Tart



Venus



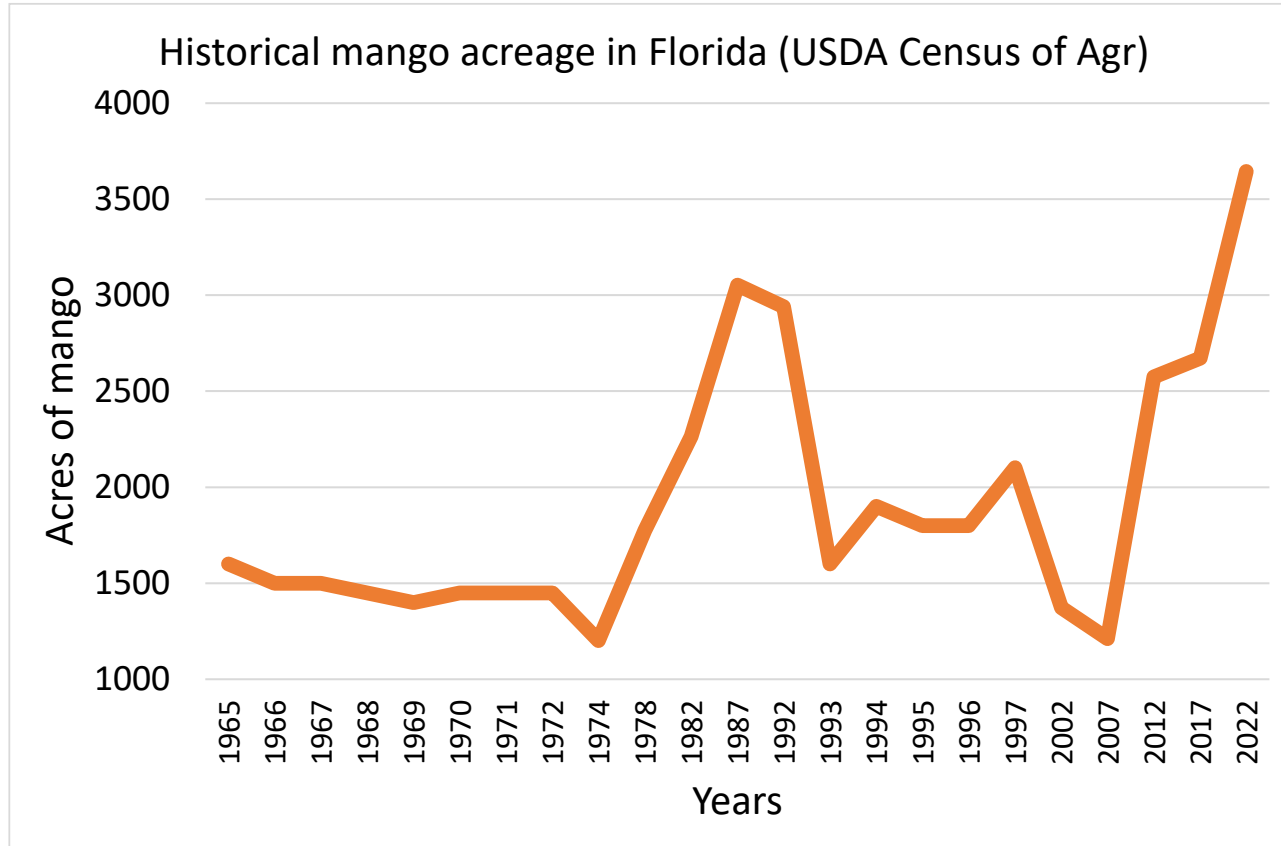
Phoenix

Description and comments on selected mango cultivars developed by Gary Zill, Zill High Performance Plants

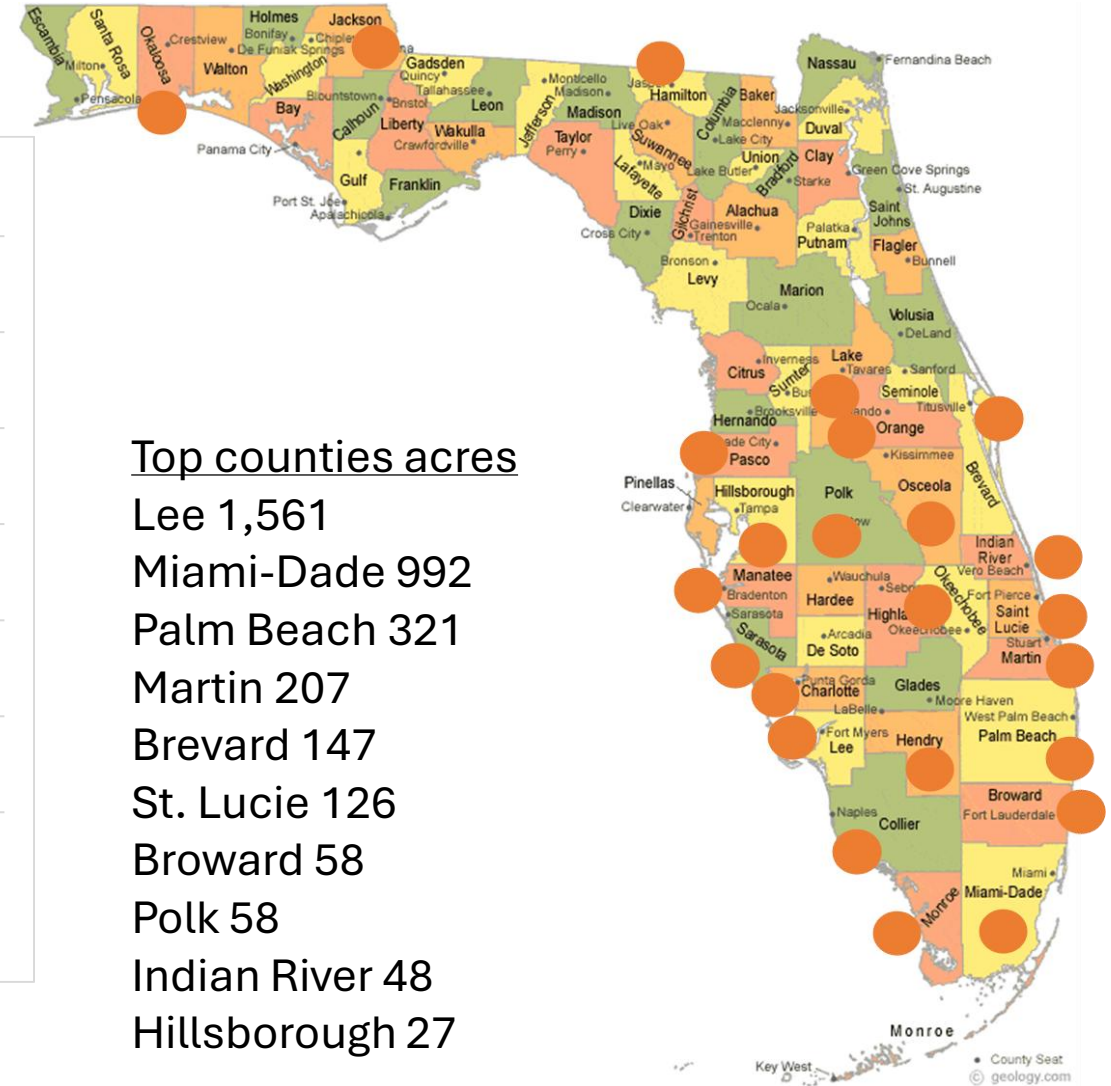
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Florida mango production



Florida currently has ~3,644 acres of commercial mango production (USDA Census of Ag, 2022), about 1,103 commercial groves, in 23 counties; estimated value of \$20.5 million annually (Blare et al., 2022)



Background and purpose

- Florida has a long history of mango selection and testing and promoting new mango cultivars and selections
- During the past decade or so Florida's industry has undergone a renaissance
 - New unique, high-quality cultivars
 - US consumer, increased mango consumption (>~4 lbs)
 - Increased interest in and enthusiasm for specialty mango varieties
- The purpose of this presentation is to document and introduce FSHS attendees (and proceedings reader) information on a small selection of the 26 of the 40 or so relatively new and superior mango cultivars selected through the breeding program of Gary Zill, Zill High Performance Plants



Selection for excellence

- Gary Zill of Zill High Performance Plants has been evaluating and selecting for new mango cultivars over the past 33 years
 - Selection of maternal and paternal parents were based on their fruit and tree characteristics and young leaf aroma
 - Over 10,000 seedlings were pre-screened/evaluated manually by their young leaf aroma
- The impetus for his program was to select for mangos with more intense and more interesting Southeast Asian- and Indian-like aromas and flavors
 - Indian-type mangos have an aromatic, mild to intense, sweet flavor with citrus and spice notes
 - Southeast Asian mangos are also aromatic and have a high sweetness with notes of citrus and tropical fruit flavors

Basic characterization

Indian types

Cultivar	Flavor intensity
Butter Cream	Moderate
CeciLove	Moderate
P22	Intense
Sweet Tart	Intense
Venus	Moderate

1, Photo credit Tropical Acres Farms; 2, Miami Fruit.org; 3, Tampa Tropical Asian Nursery and; no superscript, JHCrane/UF/IFAS/TREC

Southeast Asian types

Cultivar	FI	Cultivar	FI
Coconut Cream	I	Orange Essence	Mi
Cotton Candy	Mo	Orange Sherbert	Mo
Fruit Cocktail	I	Phoenix	I
Fruit Punch	Mo-I	Piña Colada	Mo
Giselle	I	Pineapple Pleasure	Mo
Harvest Moon	Mo-I	Super Alphonso	I
Honey Kiss	I	Sugar Loaf	Mo
Karen Michelle	Mi	Super Julie	I
Lemon Zest	Mo	Sunrise	I
Little Gem	I	Ugly Betty	M
M-4	Mo		

Mild, Mi; Moderate, Mo; Intense, I



2

Butter Cream

- Medium to large (10-16 oz)
- Oval, roundish to oblique with a bumpy, uneven peel, with a green to dull yellow color at ripening
- Flavor profile is a Southeast Asian with moderately intense flavor, rich and very sweet; pulp texture is buttery and creamy
- Moderate anthracnose disease resistance
- Early-to-mid-season



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Coconut Cream

- Medium to large size (10-21 oz)
- Roundish-elliptic with an acute apex, and a light yellow-green peel with pinkish blush
- Indian-type flavor profile, the fruit the pulp is aromatic, very sweet, with an intense coconut flavor of excellent quality
- Anthracnose resistance is moderate to good and moderately resistant to bacterial black spot
- Harvest is mid-early to mid-season

1, Photo credit Tropical Acres Farms; 2, Miami Fruit.org; 3, Tampa Tropical Asian Nursery and; no superscript, JHCrane/UF/IFAS/TREC



Fruit Cocktail

- Small to medium sized (8-12 oz)
- Oblong-ovoid with an obtuse apex, an intense yellow peel and light pinkish blush
- Pulp is aromatic, fiberless with a rich, intense sweet Indian flavor profile of very good quality
- Moderate to very good anthracnose and bacterial black spot resistance
- Mid-season harvest

1, Photo credit Tropical Acres Farms; 2, Miami Fruit.org; 3, Tampa Tropical Asian Nursery and; no superscript, JHCrane/UF/IFAS/TREC



Fruit Punch

- Medium to large (16-24 oz)
- Ovoid-obovoid shaped with an obtuse apex with colorful pink-red-purple-yellow color with numerous lenticels
- Pulp is aromatic, light orange, fiberless but firm, with a moderately intense Indian flavor profile of excellent quality. °Brix ranges from 13.2 to 16.8
- Moderate anthracnose resistance, moderate susceptibility to bacterial black spot
- Early to mid-season mango



Harvest Moon

- Fruit is large to very large (20-40 oz)
- Fruit is round with round apex
- Pulp is aromatic, firm and sweet with a moderately intense to intense sweet-tart, rich Indian flavor profile of excellent quality. °Brix ranges from 13.9 to 18.9
- Very good anthracnose resistance
- Mid-season harvest



Lemon Zest

- Fruit is medium-large (14-16 oz)
- Oval-oblong with an obtuse apex
- Pulp is yellow and fiberless with a rich, sweet, moderately intense Indian flavor profile with lemon, orange-citrus notes. °Brix ranges from 12.3 to 15.9
- Resistant to anthracnose but susceptible to bacterial black spot and powdery mildew
- Harvested mid- to late season

1, Photo credit Tropical Acres Farms; 2, Miami Fruit.org; 3, Tampa Tropical Asian Nursery and; no superscript, JHCrane/UF/IFAS/TREC



Orange Essence

- Fruit is medium-large (12-17 oz)
- Roundish with an obtuse base, and broad shoulders
- Pulp is smooth, yellow-orange, with a mild Indian flavor profile, rich, very sweet with citrus notes. °Brix ranges from 13.8 to 19.6
- Moderate anthracnose resistance
- Harvest is mid- to late season



Orange Sherbert

- Fruit is small to mid-large (8-17 oz)
- Fruit is oblong-oval
- Fruit is sweet and has an excellent tart sherbert-like moderately intense Indian flavor profile. °Brix ranges from 17.3-19.8
- Anthracnose is very good
- Harvested mid-season

1, Photo credit Tropical Acres Farms; 2, Miami Fruit.org; 3, Tampa Tropical Asian Nursery and; no superscript, JHCrane/UF/IFAS/TREC



3

Piña Colada

- Fruit is small (6-12 oz)
- Ovoid-oblong with an obtuse apex
- Extremely rich and sweet-tart (pineapple-coconut notes) with a moderately intense Indian flavor profile. °Brix ranges from 16.9 to 23.7
- Susceptible to anthracnose in some locations
- Harvest is mid-season



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Pineapple Pleasure

- Medium to large (20-32 oz)
- Oblong-obovoid, bumpy,
- Moderately intense Indian sweet-tart flavor; acidity balanced with sweet pineapple notes of excellent quality
- Highly susceptible to anthracnose and powdery mildew but low bacterial spot susceptibility
- Harvested mid- to early-late season

1, Photo credit Tropical Acres Farms; 2, Miami Fruit.org; 3, Tampa Tropical Asian Nursery and; no superscript, JHCrane/UF/IFAS/TREC



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Sunrise

- Fruit is small to medium sized (8-15 oz)
- Fruit is ovoid with a perceptible beak
- Very rich, resinous, and intense spicy Indian flavor profile. °Brix ranges from 10.4 to 14.3
- Moderate anthracnose resistance
- Harvested mid-season

1, Photo credit Tropical Acres Farms; 2, Miami Fruit.org; 3, Tampa Tropical Asian Nursery and; no superscript, JHCrane/UF/IFAS/TREC



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Sweet Tart

- Fruit is small to medium size (8-12 oz)
- Fruit is oblong-ovoid, with a prominent beak
- Flavor rich, with a complex tart to very sweet intense Southeastern Asian flavor profile (flavor intensifies the longer on the tree)
- Rich, with a complex tart to very sweet intense Southeastern Asian flavor profile (flavor intensifies the longer on the tree)
- Harvested mid-season



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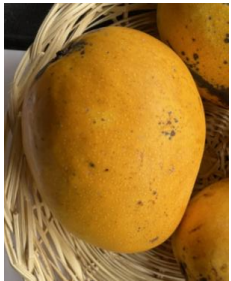
Sweet Tart



Venus



Phoenix



Fruit Cocktail¹



CeciLove¹



Butter Cream²



P-22¹



Coconut Cream¹



Giselle¹



Honey Kiss¹



Little Gem²



M-4¹



Karen Michele¹



Piña Colada³



Pineapple Pleasure¹



Super Alphonso¹



Sugar Loaf¹



Super Julie¹



Sunrise¹



Ugly Betty²

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